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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/798,108	03/10/2004	Richard C. Ferri	POU920040002US1	5927

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EXAMINER	
TRUONG, CAMQUY	
ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/798,108	FERRI ET AL.	
	Examiner	Art Unit	
	CAMQUY TRUONG	2195	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 February 2010*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,5-10,14-18,20 and 24-28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,5-10,14-18,20 and 24-28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *3/10/2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *3/22/2010, 2/24/2010*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1, 5-10, 14-18, 20 and 24-28 are pending and they are presented for examination. Claims 2-4 and 11-13, 19, and 21-23 have been cancelled.

2. This Office action is in response to the RCE filed on 02/24/10.

Continued Examination Under 37 CFR 1.114

3. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after the final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 02/24/10 has been entered.

Response to Amendment

4. According to the amendment filed on 02/24/10, independent claims 1, 10, and 20 have been amended. No new matter is added.

Response to Arguments

5. The limitation of "determine by … using the obtained one or more attributes that specify one or more non-native architectures supported by the node whether the node

supports an architecture capable of executing a specific request" is the focal point of the arguments.

6. Applicants argue, on page 8 of the Remarks, that "In Michaelis … There is no discussion, however, of obtaining attributes that specify non-native architectures supported by a node and then using that information to determine whether a node supports an architecture capable of executing a specific request". The argument has been fully considered and persuasive. Therefore, the rejection of claims 1, 5-10, 14-18, 20 and 24-28 under 35 U.S.C. 103(a) as being unpatentable over Ota et al. (U.S. 7,162,671) in view of Michaelis (U.S. 7,519,800) has been withdrawn.

7. Applicants argue, on page 7 of the Remarks that Ota fails to teach the step of obtaining attributes that specify non-native architectures supported by a node and then using that information to determine whether a node supports an architecture capable of executing a specific request. The argument has been fully considered, however, upon further consideration of Ota reference, Examiner respectfully submits that Ota teaches the step of obtaining attributes that specify non-native architectures supported by a node and then using formation that into determine whether a node supports an architecture capable of executing a specific request.

a. In col. 7, lines 5-10, Ota discloses "means for executing formality processing for retracting/resetting context information of each processor architecture enables dynamic switching of the processor architecture" and in col. 26, lines 61-63, Ota also discloses "Selecting/switching processor architecture to be executed is immediately achieved by updating architecture selection

information". The passages above indicate that, "retracting/resetting context information of each processor architecture" is the equivalence of "obtaining attributes of each node" and "retracting/resetting context information of each processor architecture" coupled with "enables dynamic switching of the processor architecture" is the equivalence of selecting or determining the processor architecture based on the context information that obtained. Further, in col. 8, lines 49-58, Ota discloses "A processor capable of switching/reconstituting architecture 5000 according to the invention is designed to be connected between an execution unit 2000 and a primary cache memory 5200 in which an instruction is stored, so as to enable execution of application software program on the execution unit 2000, which is described in a non-native instruction set (a processor assumed by the non-native instruction set as its own architecture is referred to as a "virtual processor") that is different from a native instruction set originally contained in the execution unit 2000". The limitation of "non-native instruction set" as disclosed in the passage above is interpreted as "a request".

b. In conclusion, based on the disclosure above, Examiner contends that Ota discloses the step of obtaining attributes that specify non-native architectures supported by a node and then using that information to determine whether a node supports an architecture capable of executing a specific request.

8. In light of the RCE filed on 02/24/10 and further search and consideration, claims 1, 5-10, 14-18, 20 and 24-28 are rejected in view of new ground(s) of rejection.

Specification

9. The "Cross Reference to Related Application" section must be updated because "Serial No. 10/667,163, filed September 17, 2003" is now abandoned.

10. .The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d) (1) and MPEP § 608.01(o). Correction of the following is required: the recited "*storage medium*" of Claim 20. The Specification does not mention the recited "*storage medium*". Thus, there is no support or antecedent basis for the recited "*storage medium*" that allows the meaning of the terms to be ascertained, as required in 37 CFR 1.75(d)(1).

11. The disclosure is objected to because paragraphs [0021], [0029] and [0032] contain an embedded hyperlink and/or other form of browser-executable code. Applicant is required to delete the embedded hyperlink and/or other form of browser-executable code. See MPEP § 608.01.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

12. **Claims 1, 5-6, 10, 14-15, 20 and 24-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ota et al. (U.S. 7,162,617) in view of Bond et al. (U.S. 7,574,346 B2).**

13. As to claim 1, Ota teaches substantially as claimed including: a method of facilitating allocation of resources in a heterogeneous computing environment, said method comprising:

obtaining, by a resource manager (processor architecture conversion unit 100, Fig. 1; col. 27, lines 27-32) executing on a processor of the heterogeneous computing environment (processor capable of reconstituting its architecture for executing a plurality of types of processor instruction sets of different architecture with one and the same hardware, col. 1, lines 7-15), one or more attributes relating to a node coupled to the resource manager (resetting context information of each processor architecture, col. 7, lines 6-9 and lines 51-53; col. 23, lines 17-25; col. 26, line 61 - col. 27, line 14), wherein said node is of the heterogeneous computing environment and is of a native architecture (execution unit 2000 is a native architecture, col. 1, lines 17-20; col. 8, lines 49-62), and wherein the one or more attributes specify one or more non-native architectures supported by the node (col. 5, lines 31-45; col. 7, lines 6-9 and lines 51-53; col. 11, lines 26-42; col. 28, lines 9-34), said one or more non-native architectures being different than said native architecture (col. 8, lines 54-58);

determining by the resource manager using the obtained one or more attributes that specify one or more non-native architectures supported by the node whether the

node supports an architecture capable of executing a specific request (selecting/switching processor architecture to be executed is immediately achieved by updating architecture selection information 410, col. 26, line 61 - col. 27, line 14/ resetting context information of each processor architecture enables dynamic switching (selecting/ determining) of the processor architecture, col. 7, lines 6-9; col. 28, lines 9-59), wherein the specific request specifies the architecture for the specific request that is different from the native architecture of the node (non-native instruction set that is different from a native instruction set originally contained in the execution unit 2000,col. 1, lines 23-27; col. 8, lines 49-62).

Ota does not explicitly teach allocating one or more resources of the node to the specific request, in response to the determining indicating the node supports the architecture of the request. However, Bond teaches allocating one or more resources of the node to the specific request, in response to the determining indicating the node supports the architecture of the request (allocates memory for the non-native applications, col. 8, lines 30-40; col. 9, lines 60-67).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of allocating one or more resources of the node to the specific request, in response to the determining indicating the node supports the architecture of the request as taught by Bond into Ota's system because these systems is directing to the systems that capable of operating non-native program modules within a native computing platform and by incorporating to include the teaching of Bond would improve Ota's system by allowing the system to constraining

the allocation of memory within a small and proper range for the non-native request; thereby, improve memory's usage.

14. As to claim 5, Ota teaches wherein the specific request comprises a program to be executed (any software program designated for non-native architecture, col. 1, lines 20-23).

15. As to claim 6, Ota teaches wherein the obtaining comprises providing by the node the one or more attributes to the resource manager (col. 7, lines 6-9 and lines 51-53; col. 11, lines 17-21;col. 23, lines 17-25; col. 26, lines 61-63; col. 27, lines 21-32).

16. As to claim 10, it is rejected for the same reason as claim 1.

17. As to claim 14, it is rejected for the same reason as claim 5.

18. As to claim 15, it is rejected for the same reason as claim 6.

19. As to claim 20, it is rejected for the same reason as claim 1.

20. As to claim 24, it is rejected for the same reason as claim 5.

17. As to claim 25, it is rejected for the same reason as claim 6.

21. **Claims 7-9, 16-18 and 26-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ota et al. (U.S. 7,162,617) Bond et al. (U.S. 7,574,346 B2), as applied to claims 1, 6, 10, 15, 20 and 25 above, and further in view of Michaelis (U.S. 7,519,800).**

22. As to claim 7, the combination of Ota and Bond do not explicitly teach providing of the one or more attributes by the node to the resource manager is via one or more other resource managers coupled to the node. However, Michaelis teaches wherein the providing of the one or more attributes by the node to the resource manager (management processor 102, col. 4, lines 42-44) is via one or more other resource managers (a particular primary processor 202) coupled to the node (management sub-processor 210 of the cell, col. 4, lines 40-42).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of one or more attributes by the node to the resource manager is via one or more other resource managers coupled to the node as taught by Michaelis into the combination of Ota and Bond's system because this would allow to assign processors to system partitions in a reliable to ensures that each partition includes only compatible processors.

23. As to claim 8, Michaelis teaches the resource manager (management processor 102) is a grid resource manager (Fig. 1 shows a heterogeneous computer system 100

has a system management processor 102 couples to processor cells 104, 106, 108, each have primary processors 202, col. 3, lines 4-10), and the one or more other resource managers comprise one or more cluster resource managers(col. 3, line 64 – col. 4, line 12).

24. As to claim 9, Michaelis teaches the heterogeneous computing environment comprises a grid computing environment and said resource manager comprises a grid resource manager (Fig. 1 shows a heterogeneous computer system 100 has a system management processor 102 couples to processor cells 104, 106, 108, each have primary processors 202, col. 3, lines 4-10).

13. As to claim 16, it is rejected for the same reason as claim 7 above.

25. As to claim 17, it is rejected for the same reason as claim 8 above.

26. As to claim 18, it is rejected for the same reason as claim 9 above.

27. As to claim 26, it is rejected for the same reason as claim 7 above.

28. As to claim 27, it is rejected for the same reason as claim 8 above.

29. As to claim 28, it is rejected for the same reason as claim 9 above.

Conclusion

30. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Curtis et al. (U.S. Patent No. 7,000,222) teaches the system and program for accessing variables, such as environment variables, from an operating system for use by an application program.

Goldberg et al. (U.S. Patent 5,748,890) teaches a system for authentication and auditing access by a user to non-natively secured applications having a native security system.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CAMQUY TRUONG whose telephone number is (571)272-3773. The examiner can normally be reached on 9:00am - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Emerson Puente can be reached on (571)272-3652. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Camquy Truong/
Examiner, Art Unit 2196